DOCUMENT RESUME

ED 474 453 SE 067 608

AUTHOR	Hanuscin, Deborah
TITLE	A Workshop Approach: Instructional Strategies for Working within the Constraints of Field Experiences in Elementary Science.
PUB DATE	2003-02-00
NOTE	18p.; Paper presented at the Annual Meeting of the Association for the Education of Teachers of Science (St. Louis, MO, February 2003).
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Education Majors; Elementary Secondary Education; Preservice Teachers; *Science Education; Student Teachers; *Teacher Education Programs; Teaching Experience; *Teaching Methods

ABSTRACT

This paper describes an existing early field experience program and discusses strategies implemented by the instructor working within the constraints of the program design. The workshop approach presented provides a structure for implementation of teaching strategies learned by preservice teachers during their methods course, and serves as a springboard for dialogue on pedagogical issues and theories. Student feedback on their experience over the semester with the workshop approach is included to illustrate the kinds of cognitive and affective outcomes achieved. (KHR)

Reproductions supplied by EDRS are the best that can be made
from the original document.

SE SETR 0074
1

ED 474 453

A Workshop Approach: Instructional Strategies for Working within the Constraints of Field Experiences in Elementary Science

Paper presented at the annual meeting of the Association for the Education of Teachers of Science St. Louis, Missouri February, 2003

Deborah Hanuscin, Indiana University

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

D. Hanuscin

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

SE067608

Introduction

Situated cognition, as described by Brown, Collins, and Duguid (1989) challenges the practice of separating what is learned from how it is learned and used. Learning and cognition, rather, are viewed as fundamentally situated, and developed, within social and physical contexts. If we think of knowledge as analogous to a set of tools (Perkins, 1986), it is quite possible for preservice teachers to acquire tools, such as knowledge of methods and strategies for teaching science, yet to be unable to use them. Settlage (2000) explored such relationships between teachers' instructional intentions and the actualization of strategies. Those who actively use tools, rather than just acquiring them, are able to build more robust understandings of the contexts in which the tools are used, and about the tools themselves.

Learning how to use a tool, for example a teaching strategy, involves far more than can be captured by any explicit set of guidelines or steps. Implementation consists of reacting to conditions and situations that arise within the context of teaching--including the environment and the students themselves. As such, methods classes alone cannot sufficiently prepare preservice teachers for the challenges of teaching science at the elementary level. Field-based teaching experiences are critical as a context for authentic practice. Field experiences that optimize pre-service teachers' opportunities to experience success implementing methods taught in science methods courses are necessary to bridge the gap between knowing and doing, theory and practice.

However, the extent to which field experiences provide authentic practice and opportunity to implement learned strategies is mediated by a number of constraints which prevent these experiences from closely approximating that of a classroom teacher- most

BEST COPY AVAILABLE

notably, the length of time and frequency which preservice teachers have contact with elementary students. Several studies (e.g. Wilson, 1996) have examined innovative designs for elementary science methods courses and field experiences, but what about those science educators who must work within the constraints of their existing programs?

The purpose of this paper is to describe an existing early field experience program and discuss strategies implemented by the instructor, working within the constraints of the program design. The workshop approach presented in this paper provides a structure for implementation of teaching strategies learned by preservice teachers during their methods course and serves as a springboard for a dialogue on pedagogical issues and theories. Student feedback on their experience over the semester with the workshop approach is included to illustrate the kinds of cognitive and affective outcomes achieved. The author's personal account of her experience developing and implementing this approach can inform other science teacher educators work within the constraints of the field experience component of their university's teacher preparation programs.

Early Field Experience

The Early Field Experience is part of a 9-credit hour cluster of courses taken by elementary education majors, usually their junior year, as the first of their professional preparation courses. Thirty students are enrolled in the course, the majority of which are white females around 20 years of age. For many of the preservice teachers, this is their first time entering the schools in an instructional capacity. In addition to the early field experience, students are enrolled in math and science methods courses as part of the cluster arrangement.

BEST COPY AVAILABLE

As part of the early field experience, each of the preservice teachers is assigned to a classroom in a local elementary school for a period of 45 minutes, once a week, for 9 weeks, where they work with a small group of 4-5 students. Four of the sessions are dedicated to science teaching, during which preservice teachers are required to implement a lesson following the Learning Cycle (see Bybee, Buchwald, Crissman, Hell, Kuerbis, Matsumoto, & McInerney, 1989) for science.

In the semester in which the workshop approach was implemented, the author, a former elementary teacher and then graduate student, was an instructor of the semester-long elementary science methods course, and the accompanying early field experience. This was her third year teaching the methods course, and her second semester teaching it in conjunction with the early field experience. In her experience with teaching the course, she encountered several inter-related constraints of the course design, which functioned together to serve as barriers to providing an optimal learning experience for preservice teachers.

Working Within Constraints

Time is just one constraint under which methods instructors and field experience supervisors must design their courses. While Cannon (1999) found that extended practicum experiences in elementary science teaching positively increases preservice science teachers personal-science-teaching-efficacy beliefs, extended practicum experiences such as these are not the reality in all universities, as illustrated by the situation described in this paper. Since many preservice teachers enter their methods courses with negative perceptions of science and low enthusiasm for teaching science

BEST COPY AVAILABLE

(e.g. Ellsworth & Buss, 2000) providing them with a positive experience in their field placement is critical for increasing their science teaching self-efficacy (Bandura, 1997).

Additionally, with such little time spent in the schools, preservice teachers have limited opportunities to interact with the classroom teachers, whose students they teach. In previous semesters, this lack of interaction was perceived as a lack of interest on the teachers' part by some of the preservice teachers. One student reflected on her final day of the field experience:

> *It was as if [the teacher] didn't even know we were coming. It was either this or just the fact that she didn't care. I don't understand; were we not expected, or worse, wanted?* (Claire)

As a requirement of the science methods course, the preservice teachers plan a sequence of lessons relating to a pre-determined science topic for the grade level of the classroom to which they are assigned. The Learning Cycle (see Bybee, Buchwald, Crissman, Hell, Kuerbis, Matsumoto, & McInerney, 1989) has been the chosen lesson format and method of teaching for students to implement, across all sections of the science methods courses. Feedback given anonymously by students on the final course evaluations indicates that they perceived this as a constraint to their own teaching and learning:

> *One change I would like to see in the [field experience] is to present more of a combination of methods approach [sic] than such a strong focus on one methodology.* (Anonymous)

The intent is that the Learning Cycle would occur over the course of the four sessions, however because these sessions took place once a week, this served as a barrier to effective instruction; preservice teachers often found that students could not recall what

had occurred the previous week. Other preservice teachers indicated that in light of the time constraints, the expectations for teaching science were unreasonable:

> *I honestly feel that it is virtually impossible for the students to do a minds-on, hands-on activity in the 45 minutes that we are in the classroom.* (Anonymous)

As this is the first cluster of their professional courses, it has traditionally been the case that preservice teachers would teach their lessons to small groups of 4-5 students. While this situation certainly differs from the practice of classroom teachers, who must handle instruction of the entire class, and thus can be viewed as a constraint to providing authentic practice, research shows this arrangement may provide several benefits to preservice teachers' efficacy. Wilson (1996) reported preservice teachers preferred small group activities, which increased self-efficacy. A cooperative early field experience investigated by Cannon and Scharmann (1996), in which preservice teachers team-taught lessons, had a similar positive influence on students' science teaching self-efficacy.

However, when combined with an enrollment of 30, this method of separating the students into different groups and classroom assignments during the field placement poses a challenge for the instructor, who is solely responsible for providing preservice teachers with feedback regarding their teaching. With thirty preservice teachers spread out into six different classrooms located in different areas of the campus, and with five lessons occurring simultaneously within each of these classroom, there is very little opportunity to observe individuals on a regular basis for extended periods of time, which is necessary for providing meaningful feedback that can assist the preservice teachers in improving their practice, and can be an important source of information for building self-efficacy (Bandura, 1997).

BEST COPY AVAILABLE

In light of the constraints of this teaching assignment, providing students with an opportunity for authentic practice and for success in teaching science effectively to students would be difficult, though possible, for the instructor to provide. The means for achieving this would be come from within the course itself.

The Workshop Approach

In one of the assigned readings for the science methods course, an article from *Science and Children* by Jones (1999) described a "workshop approach" in which teachers created learning centers focuses on a single science concept. In past semesters, this had been a favorite among the preservice teachers, and one they consistently recommended be retained on the reading list. The appeal of the article was that it gave practical solutions for dealing with constraints to teaching science such as limited time, money for supplies, classroom management, organization, and space while at the same time focusing on pedagogical issues such as constructivist perspectives on learning, questioning strategies, and the teacher's role during inquiry. In addition, the fact that it was published in a practitioner's journal and was written about the experiences of actual teachers seemed to lend it a higher degree of credibility in the eyes of the preservice teachers. This, combined with their own familiarity with learning centers from their days as elementary students, gave credence that this would be something they'd likely implement in their future classroom teaching—and thus to them, an "authentic practice".

The workshop approach also fit well with the course focus on the *National Science Education Teaching Standards*, as the author described how the approach was consistent with Teaching Standard B: Teachers of science guide and facilitate learning, and Teaching Standard D: Teachers of science design and manage learning environments

BEST COPY AVAILABLE

that provide students with the time, space, and resources needed for learning science (National Research Council, 1996, chapter 3). The workshop approach became the inspiration for a structure that would allow the instructor to work within the constraints of the course which were beyond her control, namely that students would have four days of science teaching in the schools, would be required to implement the Learning Cycle method, and would work with small groups of students. Rather than plan a series of lessons that would be taught to a small group of children, the preservice teachers would plan a series of explorations that could be performed by small groups of children in a workshop format.

The school in which preservice teachers were placed for their field experience had a separate science lab facility, which was a converted classroom that now contained laboratory tables rather than desks. The principal agreed to reserve the lab for the field experience students during their assigned teaching sessions. Four teachers, two each at the primary and intermediate levels, were recruited to bring their classes to the lab for one of the teaching sessions. Their students would be divided into groups of five before they arrived in the lab on their assigned day for a "science workshop". The instructor and the teachers reviewed the teacher's long-range plans and curricula to choose topics consistent with the state academic standards for science, and that would complement their own classroom instruction. It was decided that the four workshops would focus on electrical circuits (4th grade), magnetism (kindergarten), properties of light (6th grade), and sound (2nd grade).

During the first part of the semester, preservice teachers worked in cooperative groups to design four different learning cycle lessons in which the exploration phase

BEST COPY AVAILABLE

consisted of a "science workshop". Each of the five groups were responsible for planning one of five inter-related stations which would help students develop a conceptual understanding of the topic. The "workshop" itself would be an hour-long event during which a single class of elementary students would rotate in groups through a series of learning centers facilitated by the preservice teachers. The cooperative planning of the workshop around a single topic and "big idea" assisted preservice teachers in overcoming "Activitymania", a phenomenon described in another of the course readings by Nelson and Moscovici (1998; see also Moscovici, 1999) in which science instruction consists of disjointed and disconnected prepackaged activities. Rather, the stations were coordinated through among-group cooperation to ensure these related in a way that built upon and reinforced students' conceptual understanding of ideas such as "What do magnets attract?" and "What is a circuit?".

Groups prepared a list of necessary materials, organized their arrangment for the station, and prepared lists of questions to facilitate the activity, following the Elstgeest model (Elstgeest, 2001). Their plans were submitted in draft form for feedback and approval (non-graded) to the instructor before the event; upon completion of the event, a revised Learning Cycle lesson plan containing the complete science workshop was submitted along with preservice teachers' reflections on the experiences for formal evaluation. (For an overview of the science workshop for *What is a circuit?*, see Appendices.)

The day of each workshop, preservice teachers arrived early at the school site, to set up their stations in the science laboratory. At the designated times, the teacher brought their classes to the lab, divided them into groups, and reviewed rules for behavior

BEST COPY AVAILABLE

before sending each group to a station to begin. At each workshop, the teacher remained in the lab with her students, taking an interest in what the preservice teachers had planned and were doing at each station. Several requested a copy of the workshop plans for their own use, which was a compliment to the preservice teachers. The principal also visited during two of the workshops, remaining to provide positive feedback to the preservice teachers at the conclusion of the event. This interaction, though minimal, was important to the preservice teachers, and contributed to their sense of success in implementing their lessons.

The room was noisy and filled with people, yet this did not serve to distract the elementary students during their investigations. All groups appeared intensely engaged at their stations, and often hesitant to move on to the next one when it was time to rotate. Upon the conclusion of the workshop, the reaction of the elementary students, as well as the teachers, indicated it had been a positive experience for them. Smiles abounded and inquiries as to whether they would be able to return to the lab again the following day were made by several students. The preservice teachers seemed energized by this feedback.

In Reflection

Being able to facilitate the lesson multiple times within a single workshop as small groups of children rotated to their station allowed the preservice teachers to improvise and adjust ineffective strategies in order to improve their instruction. Normally, these preservice teachers would implement a lesson a single time, and if that lesson proved unsuccessful or ineffective, they would have no such chance to adjust their strategies and try again. According to Bandura (1986, 1997) mastery experiences are one

of the most powerful sources of self-efficacy information, and directly influences self-perception of teaching competance. Thus, early success in science teaching is important for preservice teachers. In a debriefing session held at the conclusion of the workshops, the general consensus of the preservice teachers was that they had improved with each rotation of the students through their station—gaining comfort in their ability to guide the students with questions, and their abilities to innovate and improvise within the goals of their plans for the activities. One student commented:

> *Each time I led the activity, I changed a question I asked or added something. By the end, I felt like an expert.* (Bethany)

Additionally, the benefit of the elementary students having multiple encounters with a concept was apparent; the preservice teachers reported a noticeable difference in students' understanding after several rotations, and the confidence with which they approached each new station. This served to reinforce the idea conveyed by the instructor during the methods course that science cannot be taught as a series of "one-shot" lessons, but should build upon and connect to each other to promote students' conceptual development.

Another benefit of this approach was the opportunity to host science workshops with students at different grade levels. These experiences provided a context for discussion of developmentally appropriate practice in the methods courses. Preservice teachers were able to offer firsthand examples of differences in elementary students' cognitive functioning and abilities in science and relate these to course topics such as misconceptions, conceptual change, and process skills and how these could be applied to students at a variety of grade levels. For example, the persistence of misconceptions was

BEST COPY AVAILABLE

evident in the case shared by two preservice teachers of a kindergartener who insisted that magnets attracted all metals, despite the fact she could not make a magnet attract aluminum foil. The preservice teachers discussed how a teacher should respond in such cases. Instances such as these served as springboards for class dialogue concerning ways to address misconceptions, and the question of students' developmental readiness for conceptual change.

Furthermore, experience with teaching science to students in various grade levels also alleviated preservice teachers' concerns about being able to teach and adapt instruction in science to an unknown grade level in their future student teaching, and in some cases served as a "wake up call" for the need to strengthen their own content knowledge in science:

> *I couldn't get over how <u>much</u> the kids knew. As a teacher, I'm really going to need to know my stuff.* (Jessica)

Similar to findings by Wilson (1996) and Cannon and Scharmann (1996), the preservice teachers also indicated that the cooperative structure of the science workshop was a positive aspect of the field experience:

> *I like the "team teaching" approach. I feel a lot less pressure, because if I mess up, hopefully someone else will catch my mistake, or if I forget to include something we talked about, someone can fill me in. I would rather teach like this than alone. I like to work as team with people, and I think our group of teachers worked well together. We had a good dynamic; where one person had difficulties the other was stronger in that area...* (Lucy)

Additional feedback given by preservice teachers in debriefing sessions following the workshops indicated they found the experience relevant and meaningful, and they felt enthusiasm for teaching science:

> *[The workshop] helped prepare us for actually teaching an elementary science class.* (Allison)

> *I really value the fact that after this semester I feel much more comfortable with the idea of teaching science.* (Karen)

Even those students who entered the course with positive attitudes toward science and relatively comfortable with the idea of teaching science benefited:

> *Even though I felt confident about science teaching before this... I learned so much that now I am more enthusiastic and confident about guiding children in their exploration of science concepts.* (Amanda)

Summary

Science teacher education is not limited to methods courses; the accompanying field experience in science (where it exists) and student teaching are both important elements in preparing preservice elementary teachers for the challenges of teaching science at the elementary level. Early field experiences should provide preservice teachers with meaningful and relevant opportunities to experience success in teaching science to children.

While educators of teachers of science may not always have the freedom to design ideal field experiences for their preservice elementary teachers, there are ways to find freedom within the constaints of existing programs. The workshop approach is just one example of a successful undertaking that allows preservice teachers to develop their instructional skills in an authentic setting, and can provide the prior experience necessary for internalization of content presented in methods courses. Further research on innovative approaches for field experiences, such as the workshop approach, can benefit

educators of teachers of science in designing their own courses and field experiences and working to overcome the constraints they encounter.

Appendix

6th Grade Science Workshop Overview: What is a circuit?
Learning Cycle Exploration Phase

Station One: Light the Bulb Challenge
Materials: D-cell batteries, bulbs, wires
Students are challenged to light the bulb using the materials provided, and then formulate a list of "rules" for making the bulb light.

Station Two: Conductors & Insulators
Materials: D-cell batteries, bulbs, wires, assortment of conducting and insulating materials to test
Students explore circuits made using different materials to determine which can be used successfully to light the bulb.

Station Three: Will it light?
Materials: circuit drawings, D-cell batteries, bulbs, wires
Students examine drawings and make predictions about whether or not the bulb will light. They build the circuit as shown to test their predictions.

Station Four: The Switch is On
Materials: D-cell batteries, bulbs, wires, assortment of conducting and insulating materials including note cards, cardboard, paperclips, paper fasteners
Students are challenged to design a switch that can turn the light off and on by opening and closing the circuit.

Station Five: Circuit Puzzles
Materials: preconstructed circuit puzzles, D-cell batteries, bulbs, wires
Students test connections between contact points on the circuit puzzles, observing whether the bulb lights and making inferences about the configuration of the connections within the puzzle.

References

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W. H. Freeman.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. Educational Researcher, 18, 32-42.

Bybee, R.W., Buchwald, C.E., Crissman, S., Hell, D.R., Kuerbis, P.J., Matsumoto, C., & McInerney, J.D. (1989). Science and technology education for the elementary years: Frameworks for curriculum and instruction. Washington, DC: National Center for Improving Science Education.

Cannon, J.R. & Scharmann, L.C. (1996). Influence of a cooperative early field experience on preservice elementary teachers' science self-efficacy. *Science Education, 80*(4), 419-437.

Cannon, J.R. (1999). The influence of an extended elementary science teaching practicum experience upon preservice elementary teachers' science self efficacy. Science Educator, 8(1), 30-35.

Elstgeest, J. (2001). The right question at the right time. In W. Harlen (Eds.), Primary science: Taking the plunge. How to teach science more effectively for ages 5 to 12. (pp. 37-46). Portsmouth, NH: Heinemann.

Elsworth, J.Z. and Buss, A. (2000). Autobiographical stories from preservice elementary mathematics and science students: Implications for K-16 teaching. *School Science & Mathematics 100(7),* 355-344.

Jones, I. (1999) A workshop approach: Using learning centers to teach early childhood science. Science and Children 37(3), 26-31, 55.

Moscovici, H. (1999). Shifting from activitymania to inquiry science—What do we (science educators) need to do? (Report No. SE063779). Washington, DC: ERIC Clearinghouse for Science, Mathematics and Environmental Education. (ERIC Document Reproduction Service No. ED444825)

National Research Council (1996). *National Science Education Standards.* Washington, DC: National Academy Press.

Perkins, D. N. (1986). *Knowledge as design.* Hillsdale, NJ: Lawrence Erlbaum and Associates.

BEST COPY AVAILABLE

Settlage, J. (2000). Understanding the learning cycle: Influence on abilities to embrace the approach by preservice teachers. *Science Education, 84*(1), 43-51.

Nelson, T.H & Moscovici, H. (1998). Shifting from Activitymania to Inquiry. *Science and Children*, *35*(4), 14-17,40.

Wilson, J.D. (1996). An evaluation of the field experiences of the innovative model for the preparation of elementary teachers for science, mathematics, and technology. *Journal of Teacher Education,* 47(1), 53-59.

SE067608

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: A Workshop Approach: Instructional Strategies for Working Within the Constraints of Field Experiences in Elementary Science	
Author(s): Deborah Hanuscin	
Corporate Source:	Publication Date:

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 1	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE; AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2A	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2B
Level 1 ☑	**Level 2A** ☐	**Level 2B** ☐
Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Signature: Deborah Hanuscin	Printed Name/Position/Title: Deborah Hanuscin	
Organization/Address: IU School of Education, Suite 3002 Bloomington, Indiana 47405	Telephone: 812 856 8161	FAX: 812 856 8116
	E-Mail Address: dhanuscie indiana.edu	Date: 2.3.03

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfacility.org